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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,468	11/26/2001	Michel Colmant	CH9-1999-0015	7225

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EXAMINER

YANG, LINA

ART UNIT PAPER NUMBER

2665

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/994,468	<b>Applicant(s)</b> COLMANT ET AL.	
	<b>Examiner</b> Lina Yang	<b>Art Unit</b> 2665	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 14 November 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 13 is/are rejected.
- 7) ☒ Claim(s) 5-12, 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/26/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o).

Claim 2 recites the limitation "a multicast vector" in line 20. There is insufficient antecedent basis for this limitation in the claim and in the specification.

### ***Claim Objections***

Claim 5 is objected to because of the following informalities: the first time appearance of "almost full" on page 25 line 10, needs to be defined. Appropriate correction is required.

Claim 13 is objected to because of the following informalities: the preamble recites "A fixed-length cell routing switch providing routing capability for variable-length cell traffic" on page 27 line 10. There is a contradiction between two recited cells. Appropriate correction is required.

Claims 5-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 5-12 have been further treated on the merits.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Heddes et al. (U.S. Patent No. 5,311,509).

Regarding claim 1, Heddes teaches a method for providing routing capability for variable-length unit traffic in a fixed-length cell routing switch with a shared memory characterized in that an incoming variable-length unit, a frame, is segmented into a plurality of fixed-length cells (col. 3 lines 55-59) including a start-of-frame cell (FIRST), one or more continuation cell(s) (MIDDLE), and an end-of-frame cell (LAST) (Element 40 in Fig. 3; Col. 7 lines 16-25), said fixed-length cells are routed through said switch, at an output of said switch (col. 3 lines 55-59), subsequent and deadlock-free transmission of consecutive cells of a certain frame is guaranteed by blocking any cell of a different frame from interleaving, which is governed by defining a predetermined first condition for said shared memory (condition for buffer memory 24' in transmitter controlled by manger 112, Fig. 2A; col. 5 lines 12-15); defining a predetermined second condition for said certain frame and its cells (condition for buffer memory 24 in receiver controlled by manger 112, Fig. 2B; col. 5 lines 12-15); controlling a

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cell's entry into said shared memory depending upon said first condition (buffer memory 24' in transmitter is for the user data input), and controlling transmission of a said cell of said certain frame depending upon said second condition (buffer memory 24 in receiver is for the user data output).

Regarding claim 2, Heddes further teaches a method wherein further a frame to be transmitted is assigned a multicast vector indicating a plurality of outputs of the switch (Fig. 3 first three addresses bytes in header for cell 35).

Regarding claim 3, Heddes further teaches a method wherein a frame to be transmitted is assigned a priority and (col. 3 lines 64-66; col. 4 line 1), at an output of the switch, transmission of cells of a frame with a lower priority is interrupted when a frame with a higher priority is to be transmitted at said same output col. 4 lines 17-24).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heddes et al. (U.S. Patent No. 5,311,509) in view of Mustafa (U.S. Patent Application No. US 20020087716 A1).

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Regarding claim 4, Heddes differs from the claimed invention in that dose not specifically teaches a method wherein transmission of cells of the frame with the lower priority is resumed when the frame with the higher priority is fully transmitted. However, Mustafa teaches that transmission of cells of the frame with the lower priority is resumed when the frame with the higher priority is fully transmitted (page 16, paragraph [0134] lines 10-12). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate resuming the transmission of cells of the frame with the lower priority after the frame with the higher priority is fully transmitted, such as the one taught by Mustafa into the assembly taught by Heddes simply in order to complete the transmission of cells of the frame with the lower priority.

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heddes et al. (U.S. Patent No. 5,311,509) in view of Chiussi et al. (U.S. Patent No. 5,689,505).

Regarding claim 13, Heddes teaches a fixed-length cell routing switch providing routing capability for variable-length unit traffic with a shared memory, characterized in that each address of said memory includes storage space for one cell (element 24 in Fig. 2B; col. 4 lines 46-66), thus, when a cell arrives, providing means for storing the cell's data at an available memory address (element 24 in Fig. 2B; col. 4 lines 46-66), storing said used address in each destination output queue (element 25 in Fig. 2B; col. 4 lines 46-66).

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Heddes differs from the claimed invention in that does not specifically teaches that each address of shared memory includes an associated multicast counter, and counting and storing the number of destinations in said counter when a cell arrives. However, it is well known in the art that multicast counter is used for multicast cells in switching networks to storing a number equal to the number of out-ports to which the cell is to be outputted. For example, Chiussi teaches that each address of shared memory includes an associated multicast counter (element 1055 in Fig. 10; col. 12 lines 22-25) and counting and storing the number of destinations in said counter when a cell arrives (col. 12 lines 14-35). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate using a multicast counter in the shared memory, and counting and storing the number of destinations in said counter when a cell arrives, such as the one taught by Chiussi into the assembly taught by Heddes in order to accommodate the transmission of multicast cells.

***Allowable Subject Matter***

4. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571)272-3151. The examiner can normally be reached on 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY



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